

Please amend the claims as follows:

Claims 1-18 (cancelled).

19. (Previously Presented) Method for producing a ceramic coating on metallic and/or ceramic surfaces and products in reactors, process plants and combustion plants, characterized in that a mixture of fine-particle boron nitride, at least one inorganic binding agent of medium particle size in the nanometer range, selected from the group consisting of  $\text{Al}_2\text{O}_3$ ,  $\text{AlO(OH)}$ ,  $\text{ZrO}_2$ ,  $\text{Y-ZrO}_2$ ,  $\text{TiO}_2$ ,  $\text{SiO}_2$ ,  $\text{Fe}_2\text{O}_3$   $\text{SnO}_2$  and an associated precursor compound and at least one solvent and/or water is applied onto the metallic and/or ceramic surfaces or the product, and the applied mixture is burned into a coating through heating during operation of the reactors process plants and combustion plants.

20. (Currently Amended) Method according to claim 19 characterized in that the surfaces are selected from a group consisting of metallic pipe walls, ceramic pipe wall plates, stones and lining substances in reactors, process plants and combustion plants are provided with the coating.

21. (Previously Presented) Method according to claim 20, characterized in that the surfaces of parts of waste incinerators are provided with the coating.

22. (Previously Presented) Method for producing a ceramic coating of metallic and/or ceramic surfaces and products in reactors, process plants and combustion plants characterized in that a mixture of fine-particle boron

nitride, at least one organo-metallic compound, used as inorganic binding agent, and at least one solvent and/or water is applied onto the metallic and/or ceramic surfaces or the product, and the applied mixture is burned into a coating through heating.

23. (Previously Presented) Method according to claim 19, characterized in that the inorganic binding agent has an average particle size of less than 100 nm.

24. (Previously Presented) Method according to claim 19, characterized in that the solvent is selected from the group consisting of ethanol, 1-propanol, 2-propanol, 2-butoxyethanol and water.

25. (Currently Amended) ~~Method according to claim 24, characterized in that Method for producing a ceramic coating on metallic and/or ceramic surfaces and products in reactors, process plants and combustion plants, characterized in that a mixture of fine-particle boron nitride, at least one inorganic binding agent of medium particle size in the nanometer range, selected from the group consisting of Al<sub>2</sub>O<sub>3</sub>, AlO(OH), ZrO<sub>2</sub>, Y-ZrO<sub>2</sub>, TiO<sub>2</sub>, SiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and an associated precursor compound and at least one solvent and/or water is applied onto the metallic and/or ceramic surfaces or the product, and the applied mixture is burned into a coating through heating during operation of the reactors process plants and combustion plants, the solvent contains containing a mixture of ethanol, 2-butoxyethanol and water.~~

26. (Cancelled)

27. (Currently Amended) Method according to claim 19, characterized in that ~~burning-in-of-the applied mixture is carried out applied~~ before operational start of the reactor, process plant or combustion plant through heating to at least 400°C.

28. (Previously Presented) Method for repairing a ceramic coating of metallic and/or ceramic surfaces and products in reactors, process plants and combustion plants, characterized in that a damaged coating is repaired through partial or complete application of the coating on the damaged coating in accordance with claim 19.

29. (Previously Presented) Method according to claim 19, characterized in that the mixture is applied through rinsing, rolling, immersion and/or flooding.

Claims 30-33 (cancelled).